

SN. 10/506,295

ATTORNEY DOCKET NO. MATS:049

IN THE DRAWINGS

Applicants enclose corrected formal Fig. 1 for the examiner's approval.

REMARKS

Claims 1-18 remain pending in this application for which applicants seek reconsideration.

Amendment

Claims 1-5, 7-13, 17, and 18 have been amended to improve their form and to remove the informalities noted by the examiner. In particular, in claims 2, 3, 9, and 10, the term "exceeds" has been changed to --does not exceed-- based on page 14, the first full paragraph, of the present specification. The language --a rapid rise-- has been inserted in the claims based on page 14, line 1, to clarify that the operational control circuit prevents the voltage sensor from detecting the rapid rise of voltage, not just any voltage. Other changes all relate to improving the form of the claims, such as deleting superfluous language "unit battery" and defining that the group of batteries forms a secondary battery.

Drawing Objection

The examiner objected to the drawing under Rule 83(a) because the examiner believes that not every claimed feature is illustrated. In particular, the examiner is requiring applicants to illustrate "the unit battery, the switch, the predetermined time, the another predetermined time, the final discharge voltage." Applicants traverse this objection because elements such as a switch can be generally illustrated, namely a labeled rectangular box, as is presently illustrated in Fig. 1. Parameters, such as time and voltage, however, are not structural features, but rather functional descriptors that need not be illustrated. Fig. 1, however, has been amended to identify all elements, such as sensor, display, etc., that are represented graphically.

Objection to Inconsistent Usage

The examiner objected to the use of the term "switch" in the claims because the specification describes the same as a "charging current interrupter." Applicants traverse this objection because the specification clearly defines that the "charging current interrupter 6" comprises a switch. See page 13, line 2, of the present disclosure.

§ 112 Rejection

Claims 2-7 were rejected under 35 U.S.C. § 112, second paragraph, because they contain minor informalities. These claims have been amended to remove the language objected to by the examiner, even though applicants traverse the examiner's objection relating to the usage of the term "or."

Art Rejection

Claims 1-4 and 7-18 were rejected under 35 U.S.C. § 103(a) as unpatentable over Reher (USP 5,321,627) in view of Nagata (USP 6,653,819) and Suzuki (JP 08-223812). Claims 5 and 6 were rejected under § 103(a) further in view of Yamano (USP 4,636,445). Applicants traverse these rejections because the applied references would not have disclosed or taught the claimed operational control circuit.

Independent claims 1 and 8 each call for a group of batteries having a plurality of connected batteries forming a secondary battery, a plurality of sensors for detecting temperature and voltage thereof, a display device for displaying the condition of the secondary battery, a switch for controlling charge and discharge of the secondary battery, and an operational control circuit for generating a signal based on signals input from the plurality of sensors to make the display device display the condition of the secondary battery and to activate the switch.

Reher merely discloses a battery monitor without any display device. Moreover, it has no switch for controlling charging and discharging of a battery. Nagata discloses a refresh charge control device for an automobile. Nagata's switch relied upon by the examiner is for charging the battery by regeneration braking or engine motivity. Although Suzuki discloses a display device 9, it appears to only display the count value of its counter.

First, applicants submit that the combination urged by the examiner would not have been tenable because no motivation exists for the combination. Second, even if the combination were deemed proper for argument's sake, applicants submit that the combination would not have taught the claimed operational circuit, let alone providing both the display device for displaying the condition of the secondary battery and the refresh demand display device (claim 1). Yamano also would not have alleviated the shortcomings of Reher as modified.


Conclusion

Applicants submit that claims 1-18 patentably distinguish over the applied references and are in condition for allowance. Should the examiner have any issues concerning this reply or any other outstanding issues remaining in this application, applicants urge the examiner to contact the undersigned to expedite prosecution.

Respectfully submitted,

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DATE



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